Gina Harrison
Director
Federal Regulatory Relations

1275 Pennsylvania Avenue, N.W., Suite 400
Washington, D.C. 20004
(202) 383-6423

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December 13, 1995

EX PARTE

William F. Caton
Acting Secretary
Federal Communications Commission
Mail Stop 1170
1919 M Street, N.W., Room 222
Washington, D.C. 20554

Dear Mr. Caton:

Re: CC Docket No. 94-54, Equal Access and Interconnection Pertaining to Commercial Mobile Radio Service

Today, Jerry A. Hausman, MacDonald Professor of Economics at Massachusetts Institute of Technology, and I met with the following persons to discuss issues contained in Professor Hausman's Affidavit filed with Pacific Bell Mobile Service's Reply Comments to the above docket, dated July 14, 1995: Gerry DeGraba, Policy and Progam Planning Division, Common Carrier Bureau; Michael Wack, Deputy Chief and Pam Megna, Policy Division, Wireless Telecommunications Bureau; Greg Rosston, Telecommunications Policy Analyst, Jay Atkinson, Bill Sharkey, and Jeff Steinberg, Office of Plans and Policy; and Doron Fertig, Competition Division, Office of General Counsel. Copies of the attached material were distributed at the meeting.

We are submitting two copies of this notice in accordance with Section 1.1206(a)(1) of the Commission's Rules.

Please stamp and return the provided copy to confirm your receipt. Please contact me should you have any questions or require additional information concerning this matter.

Sincerely,

Gina Harrison

cc: Jay Atkinson
Gerry DeGraba
Doron Fertig
Pam Megna
Greg Rosston
Bill Sharkey
Jeff Steinberg
Michael Wack

Affidavit of Professor Jerry A. Hausman

1. My name is Jerry A. Hausman. I am the MacDonald Professor of Economics at the Massachusetts Institute of Technology in Cambridge, Massachusetts, 02139.

2. I received an A.B. degree from Brown University and a B.Phil. and D. Phil. (Ph.D.) in Economics from Oxford University where I was a Marshall Scholar. My academic and research specialties are econometrics, the use of statistical models and techniques on economic data, and microeconomics, the study of consumer behavior and the behavior of firms. I teach a course in "Competition in Telecommunications" to graduate students in economics and business at MIT each year. Mobile telecommunications, including competitive and technological developments in cellular, PCS, and ESMR are some of the primary topics covered in the course. I was a member of the editorial board of the Rand (formerly the Bell) Journal of Economics for the past 13 years. The Rand Journal is the leading economics journal of applied microeconomics and regulation. In December 1985, I received the John Bates Clark Award of the American Economic Association for the most "significant contributions to economics" by an economist under forty years of age. I have received numerous other academic and economic society awards. My curriculum vitae is attached.

3. I have done significant amounts of research in the telecommunications industry. My first experience in this area was in 1969 when I studied the Alaskan telephone system for the Army Corps of Engineers. Since that time, I have studied the demand for local measured service, the demand for intrastate toll service, consumer demands for new types of telecommunications technologies, marginal costs of local service, costs and benefits of different types of local services, including the effect of higher access fees on consumer welfare, demand and prices in the cellular telephone industry, and

consumer demands for new types of pricing options for long distance service. I have also studied the effects of new entry on competition in paging markets, telecommunications equipment markets, exchange access markets, and interexchange markets and have published a number of papers in academic journals about telecommunications. Lastly, I have also edited two recent books, Future Competition in Telecommunications (Harvard Business School Press, 1989) and Globalization, Technology, and Competition in Telecommunications (Harvard Business School Press, 1993).

4. I have been involved in the mobile telecommunications industry since 1984. I participated in PacTel's purchase of Communications Industries in 1985 and have provided testimony on previous occasions on cellular competition and regulation to state PUCs and to the FCC. I previously submitted testimony to the FCC on questions of cellular regulation, including the question of whether cellular companies should be allowed to bundle cellular CPE with cellular service, whether the FCC should forbear from regulation of mobile service providers, whether the FCC should require equal access obligations on CMRS providers, and whether the FCC should preempt state regulation of cellular. During the PCS proceedings I have filed 6 affidavits which considered eligibility questions for LECs, the presence of economies of scale and scope in providing PCS, the design of an appropriate auction framework for PCS spectrum, spectrum allocation and band size, eligibility for in-region cellular companies, and the appropriate framework for pioneer preferences. I spoke at the FCC Task Force meeting on PCS held on April 11, 1994. I also have done significant academic research in mobile telecommunications and it is one of the primary topics in my graduate course, "Competition in Telecommunications", which I teach each year at MIT.

I. Summary and Conclusions

5. I have been asked by Pacific Telesis Mobile Services (PTMS) to consider the question of whether out of region roaming requirements for wireless carriers would be in the public interest. I conclude that an out of region roaming requirement at non-discriminatory prices would be pro-competitive, would increase consumer welfare and would increase the adoption of PCS.

6. The roaming requirement should be designed so that it imposes no additional costs on wireless carriers. The requirement would impose the same obligation on wireless carriers that currently applies to cellular carriers that they have with respect to other cellular carriers. Thus, the outcome of the requirement will be pro-competitive. The requirement should also exist only for a transitional period. After this transitional period, the requirement should be removed, and market forces will likely lead to an economically efficient outcome.

II. Economic Analysis of Roaming

7. "Roaming" describes the situation when a subscriber of a given Commercial Mobile Radio Service (CMRS) uses the service of another CMRS provider even though the subscriber has no pre-existing service relationship with the "foreign" provider. Roaming has become increasingly important in the cellular industry where about 13.6% of revenues in the last 6 months of 1994 arose from roaming. Growth in roaming revenues has been about 42% per year as roaming has been technically easier for the cellular subscriber to use. Roaming revenues have been growing faster than overall cellular revenues by a statistically significant amount. Incoming calls are now significantly easier to receive in many situation than they were a few years ago. Furthermore, in-progress calls are no longer dropped at service boundaries. Given the essential mobile feature of CMRS, roaming should continue to become increasingly important in the future.

8. CMRS consumers place a high value on the ability to roam. The growth rates described above occurred despite premium prices for roaming on many cellular systems. The majority of cellular customers belong to discount plans on their home cellular systems. These discount plans take a number of forms: (1) customers receive a discount for committing to one year or longer contracts (2) customer receive discounts for plans which have given usage levels (3) customers receive discounts when they subscribe to multiple cellular numbers. However, when cellular subscribers roam to foreign cellular systems, these discounts are typically not in effect. Thus, most customers pay a non-discounted price to roam.

9. Roaming competition has also been an important component of overall cellular competition. For example, roaming is quite heavy in the Northeast corridor, i.e. the Boston-Washington region. Until about 2 years ago the standard roaming fee was $3 per day plus the undiscounted price per minute of use (or even higher). The Block A carrier in Boston and Washington eliminated the $3 per day charge for roaming. The Block A carrier gained significant market share in Boston after making this change. Subsequently, the Block B carrier in Boston also eliminated the daily roaming charge. This form of price competition directly benefits consumers and leads to greater spectrum usage through high cellular demand.

III. The Likely Importance of Roaming on Cellular Systems for PCS

10. PCS will begin operation in 1996. It is likely that PCS operators will adopt different technologies. I expect that GSM, currently used in the UK, Germany, Australia, and a number of other counties, will be a widely used technology. However, no guarantee exists that it will be adopted in every PCS MTA. Indeed, I consider this outcome to be unlikely since numerous PCS licensees currently operate cellular networks in other regions and are likely to adopt TDMA or CDMA technology to be compatible with their existing cellular systems. Thus, it is unlikely that a single technology will exist nationwide

for PCS at the beginning of its operation.

11. However, a single nationwide CMRS technology will exist over the next five years, the cellular technology currently in use on the two cellular blocks. Thus, a dual mode mobile telephone which can operate on digital PCS and on cellular will be able to provide nationwide roaming. A PCS customer who wants to roam would be able to buy a dual mode phone and use PCS in a home region, and other PCS MTAs which adopt the same technology, and use cellular roaming in incompatible technology PCS MTAs.

12. Roaming is extremely rapidly growing with about 14% of cellular revenues arising from roaming. Roaming is likely to be even more important for PCS. PCS will have very lightweight and long lasting battery mobile handsets which will make it more convenient to carry the handset at all times (future cellular handsets will also have these features). I also expect the price of mobile calls to decrease with the inception of PCS for reasons that I have discussed in previous affidavits to the FCC. These lower prices will cause consumers to make more use of CMRS and could cause consumers to adopt the use of cellular and PCS as their overall "personal" phone numbers. With these changes in technology and in prices, I expect that roaming will continue to become increasing important in the overall usage of mobile voice services.

IV. Transitional Rules for Roaming Will Be in the Public Interest

13. An FCC requirement that cellular and PCS licensees provide the same functionality to PCS roaming that cellular operators provide to cellular roaming today under the same terms and conditions will be pro-competitive and will lead to increased consumer welfare. PCS demand for roaming is likely to be quite strong, and it is unlikely that nationwide availability of non-cellular PCS roaming will exist during the startup phase of PCS. Thus, CMRS competition will be advanced if new PCS operators can provide roaming which is currently available to cellular operators. PCS customers will also value the

ability to roam into other regions, much as cellular customers do today.

14. However, in imposing this regulation it is important that the costs of cellular providers are not increased by this requirement. Thus, the PCS subscriber should be required to have a dual mode handset which is transparently similar to a roaming cellular handset to the cellular operator. In this situation where costs of cellular and PCS roaming would be the same, cellular operators could offer the same roaming terms with no loss in net revenues. Overall demand and consumer welfare would increase with no financial burden placed on existing cellular operators. The outcome will be pro-competitive and will lead to increased consumer welfare.

15. The immediate question to an economist (at least an economist such as myself) is what is the source of potential market failure which creates this regulatory requirement? The potential market failure arises from two sources. First, in the early stages of PCS it is unlikely that a single technology will be adopted in each MTA. Thus, parts of the country will exist in which a given PCS technology will not exist. I expect this problem to become less important over time as experience is gained with PCS technologies, PCS technology consortia are formed (as has happened in cellular), and the smaller 10 MHz BTA blocks are auctioned which will increase technology diversity in a given region. Thus, the first source of potential (transitory) market failure is the limited spectrum blocks available for PCS at the current time and the startup nature of PCS.

16. Second, some current cellular operators may find it in their economic interest not to provide roaming to certain PCS operators. For example, suppose that a current cellular operator attempts to limit competition from PCS in its region. The cellular operator could deny roaming or charge higher roaming prices in its other regions to put the new PCS services at a competitive disadvantage. A number of large (top 30) cellular

MSAs exist where both cellular carriers also control both blocks in a different MSA so that unilateral economic actions could lead to this outcome.

17. Dr. Bruce Owen, who submitted an affidavit on behalf of AT&T/McCaw claims that because two cellular system exist in each area, current cellular providers would not find it in their economic best interest to deny roaming or charge higher roaming prices to their new PCS rivals in other regions (Owen aff., June 14, 1995, ¶ 62). However, he apparently has not investigated the current allocation of cellular MSAs which makes this outcome quite possible. Each cellular operator may find it to be economically beneficial to deny roaming or to charge higher prices for roaming in certain cellular MSAs to make PCS less desireable to consumers who place a high value on roaming.

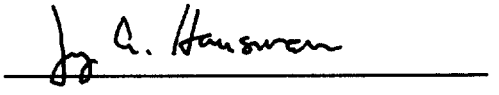
18. Dr. Owen raises three argument against the requirement for cellular systems to include provision of roaming to PCS, similar to the current provision that requires cellular operators to provide roaming service to subscribers of other cellular systems. First, he states that roaming may not be technically feasible or it may lead to costs which exceed its value. (¶ 64) Under my proposal of technically transparent roaming, all technical obligations will fall on the PCS provider, not on the current cellular providers. Thus, technical feasibility and cost will not be an issue. Second, Dr. Owen states that a roaming requirement would reduce the demand for roaming services from non-cellular systems. Thus, he claims roaming obligations could create delay in the deployment of non-cellular systems. (¶ 65) This argument is incorrect because competition will cause the economically efficient buildout of PCS networks. Dr. Owen's claim is similar to the statement that a quota will lead to faster expansion of new industries in developing economies. The statement is correct, but it ignores the loss in competition and economic efficiency which harm consumers. Lastly, Dr. Owen restates his claim that no incentive exists for cellular systems to deny roaming services. (¶ 66) He bases this claim on the foregone profit

opportunities from offering roaming services. However, he fails to consider the increase in revenue that a cellular provider would gain in a region if PCS is made less attractive by its inability to provide out of region roaming services.

V. Conclusion

19. I am proposing a transitional roaming requirement for cellular operators similar to their current requirement for other cellular systems. The requirement should be designed to impose no increase in costs on cellular operators. The requirement will be pro-competitive and will increase consumer welfare because PCS subscribers will be able to roam throughout the U.S.

I declare under penalty of perjury that the foregoing is true and correct. Executed on July 10, 1995.



Jerry A. Hausman
MacDonald Professor of Economics
MIT Cambridge, MA

Washington Post, December 1, 1995

How Sprint Spectrum wireless users make calls outside the greater Washington/Baltimore area.

It's simple, if they have a quarter. Because once they leave Sprint's very limited service area, their wireless phone can't make a call. So make sure the company you choose is Bell Atlantic NYNEX Mobile. With us, you can call to or from virtually anywhere in the country. And you can do so, knowing you have the backing and support of a leader. A leader in both technology and service who has been providing the people of this community with cellular service for over 11 years. For more information on Bell Atlantic NYNEX Mobile products and services, stop by 1304 G. Street, NW or call (202) 624-0072.

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